

**REMARKS**

Claims 1-12 remain in the application. The Examiner rejected claims 1-12 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically the Examiner pointed to the language “high-functionality polyisocyanate having at least three free isocyanate groups and no free isocyanate reactive groups” stating that there did not appear to be support for the polyisocyanate having no free isocyanate reactive groups.

As a first matter the original claim 1 stated that the first stage of the reaction was “preparation of an addition product (A) which contains one group which is reactive toward isocyanate and at least two isocyanate groups”. In the second stage this product was reacted with an additional di or polyisocyanate. Therefore, there can not be any free isocyanate reactive groups left after the two stages. The Examiner is also directed to page 2, line 29 through page 3, line 13 of the specification wherein this language is also repeated. On page 6, line 29 through page 8, line 15 the language and illustrations make it clear that the first stage produces a product that has only one isocyanate reactive group and that this product is then further reacted with additional isocyanate to form the final product. The ratio of isocyanate to isocyanate reactive groups is chosen to ensure this as stated in this section and illustrated. Additionally, on page 8, line 42 through page 9, line 25 there are other illustrations showing that the stage I product has a single isocyanate reactive group. Beginning on page 10, line 20 through page 11, line 24 the text and illustrations show reaction of the single isocyanate reactive group from stage one with the isocyanate in stage 2 to produce a final product having no free isocyanate-reactive groups. Finally, the examples 1-6 on pages 14-15 all show that the first stage produces a product having

at least two free isocyanate groups and only one isocyanate reactive group. In examples 7-16 on pages 16 through 18 the stage one products of examples 1-6 are used in the second stage wherein there is complete reaction of the isocyanate-reactive groups to produce a final product having no free isocyanate-reactive groups. Given the disclosure as recited above Applicants believe the rejection has been overcome and should be withdrawn.

The Examiner rejected claims 1, 2, and 4-13 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Bauriedel ('709). The Examiner suggests that the patentee discloses preferred ratios of initial hydroxyl groups to initial isocyanate groups which will yield applicants' claimed addition product (A). The Examiner points to the abstract and columns 2-5, especially column 5, line 4, within Bauriedel. Additionally, the Examiner points to column 3, line 45 to support the assertion that Bauriedel teaches a first stage product wherein it contains only a single hydroxyl group after the first stage.

As a first matter it is important to note that Bauriedel only discloses the use of diisocyanate compounds, no polyisocyanates having more than two NCO groups are disclosed. Use of a diisocyanate in the first stage of the present invention requires that the isocyanate reactive compound have at least three isocyanate reactive groups. This is the only way using a diisocyanate to produce a product (A) as required by the present invention that contains only one isocyanate reactive group and at least two free isocyanate groups. All the examples disclosed in Bauriedel utilize only a diol as the isocyanate reactive component, thus, it is impossible utilizing the examples of Bauriedel to generate in addition product (A) as required by claim 1 of the present invention.

Bauriedel does state in column 3, line 63 through column 4, line 8 that the starting compound could be up to a hexonal. Even given this disclosure it is clear from other sections of Bauriedel that Bauriedel never contemplates the concept of forming an addition product (A) having only a single isocyanate reactive group and at least two free isocyanate groups. The Examiner is initially directed to column 2, lines 17-19 of Bauriedel where it is stated “forming a first stage pre-polymer having a substantial number of free OH moieties attached through the alcohol nucleus”. In the section the Examiner points to in column 3 the full quotation is “Stated in its broadest terms, the minimum requirement for the first category of isocyanate is that two isocyanate moieties of differing reactivity are present. **The more reactive isocyanate moiety substantially reacts with one of the hydroxyl moieties of the polyol in the first stage of the prepolymer reaction, leaving an unreacted (mostly the less reactive) isocyanate moiety and an unreacted hydroxyl moiety on the first stage prepolymer.**” (Emphasis added). Thus, even in the example the Examiner uses the limitations of claim 1 are not met. There is not a first stage product having a single isocyanate-reactive moiety and at least two free isocyanates. The Examiner is also directed to column 4, lines 60-64 wherein Bauriedel states “until the more reactive NCO moieties of the diisocyanate have reacted almost completely with **some of the available OH moieties** (emphasis added) without the less reactive NCO moieties having reacted to any significant extent, if at all.” Finally, the Examiner is directed to column 4, line 68 through column 5, line 2 wherein Bauriedel states “Thus, suitable first stage prepolymers **which still contain free OH moieties after the more reactive NCO moieties have reacted off** ... (emphasis added)”. It is hard to rationalize why this similar language should be treated by the

Examiner as alternately as referring to the product versus to the reaction mass or product composition. It seems more rational, logical, and consistent to treat the language as Applicants have. Applicants contend that Bauriedel teaches a method wherein the product of the first stage either has only a single free isocyanate group and a single free isocyanate-reactive group or the product has multiple free isocyanate-reactive groups unlike the requirements of claim 1. Despite the Examiners reluctance to agree, applicants contend that Bauriedel clearly discloses a process that does not result in an addition product (A) having only a single isocyanate reactive group and at least two free isocyanate groups. Bauriedel instead discloses reacting the isocyanate reactive compound with a **diisocyanate** such that the resulting addition product, itself, contains multiple free OH groups or, when using a diol only one free OH group and one free NCO group. There is no discussion or disclosure within Bauriedel which would lead one of ordinary skill in the art to modify Bauriedel to generate a reaction product and process as claimed in claim 1 of the present invention. Thus, the rejection of claim 1 and the claims which depend therefrom under either 35 U.S.C. §102 or 35 U.S.C. §103(a) cannot be maintained and must be withdrawn.

Applicants' attorney respectfully submits that the claims as amended are now in

condition for allowance and respectfully requests such allowance.

Respectfully submitted,

**HOWARD & HOWARD ATTORNEYS**

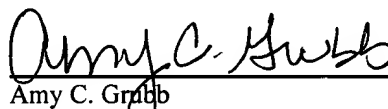
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**Randall L. Shoemaker, Registration No. 43,118**  
The Pinehurst Office Center, Suite 101  
39400 Woodward Avenue  
Bloomfield Hills, Michigan 48304-5151  
(248) 723-0425

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Amy C. Grubb

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